

=====

Sequence Listing could not be accepted due to errors.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2009; month=5; day=5; hr=15; min=19; sec=48; ms=100;]

=====

Reviewer Comments:

<210> 3

<211> 261

<212> DNA

<213> Artificial Sequence

<220>

<221> CDS

<222> (1)...(261)

<223> Cys22 tat

The above <223> response explaining "<213> Artificial Sequence" is insufficient; please give the source of the genetic material (e.g., Human Immunodeficiency Virus). Same type of response in Sequences 4-10.

Application No: 09555534 Version No: 4.0

Input Set:

Output Set:

Started: 2009-04-27 21:04:45.348
Finished: 2009-04-27 21:04:47.566
Elapsed: 0 hr(s) 0 min(s) 2 sec(s) 218 ms
Total Warnings: 34
Total Errors: 4
No. of SeqIDs Defined: 36
Actual SeqID Count: 36

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)

Input Set:

Output Set:

Started: 2009-04-27 21:04:45.348

Finished: 2009-04-27 21:04:47.566

Elapsed: 0 hr(s) 0 min(s) 2 sec(s) 218 ms

Total Warnings: 34

Total Errors: 4

No. of SeqIDs Defined: 36

Actual SeqID Count: 36

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)
W 213	Artificial or Unknown found in <213> in SEQ ID (21)
W 213	Artificial or Unknown found in <213> in SEQ ID (22)
	This error has occurred more than 20 times, will not be displayed

SEQUENCE LISTING

<110> Ensoli, Barbara

<120> HIV-1 TAT, OR DERIVATIVES THEREOF FOR
PROPHYLACTIC AND THERAPEUTIC VACCINATION

<130> 11340-003-999

<140> 09555534

<141> 2000-05-31

<150> PCT/EP98/07721

<151> 1998-11-30

<150> RM97A000743

<151> 1997-12-01

<160> 36

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 261

<212> DNA

<213> AIDS-associated retrovirus

<220>

<221> CDS

<222> (1)...(261)

<223> Wild type tat

<400> 1

atg gag cca gta gat cct aga cta gag ccc tgg aag cat cca gga agt	48
Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Lys His Pro Gly Ser	
1 5 10 15	

cag cct aaa act gct tgt acc aat tgc tat tgt aaa aag tgt tgc ttt	96
Gln Pro Lys Thr Ala Cys Thr Asn Cys Tyr Cys Lys Lys Cys Cys Phe	
20 25 30	

cat tgc caa gtt tgt ttc ata aca aaa gcc tta ggc atc tcc tat ggc	144
His Cys Gln Val Cys Phe Ile Thr Lys Ala Leu Gly Ile Ser Tyr Gly	
35 40 45	

agg aag aag cgg aga cag cga cga aga cct cct caa ggc agt cag act	192
Arg Lys Lys Arg Arg Gln Arg Arg Arg Pro Pro Gln Gly Ser Gln Thr	
50 55 60	

cat caa gtt tct cta tca aag cag ccc acc tcc caa tcc cga ggg gac	240
His Gln Val Ser Leu Ser Lys Gln Pro Thr Ser Gln Ser Arg Gly Asp	
65 70 75 80	

ccg aca ggc ccg aag gaa tag	261
Pro Thr Gly Pro Lys Glu *	

<210> 2

<211> 86

<212> PRT

<213> AIDS-associated retrovirus

<400> 2

```

Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Lys His Pro Gly Ser
 1           5           10           15
Gln Pro Lys Thr Ala Cys Thr Asn Cys Tyr Cys Lys Lys Cys Cys Phe
          20           25           30
His Cys Gln Val Cys Phe Ile Thr Lys Ala Leu Gly Ile Ser Tyr Gly
          35           40           45
Arg Lys Lys Arg Arg Gln Arg Arg Arg Pro Pro Gln Gly Ser Gln Thr
          50           55           60
His Gln Val Ser Leu Ser Lys Gln Pro Thr Ser Gln Ser Arg Gly Asp
65           70           75           80
Pro Thr Gly Pro Lys Glu
          85

```

<210> 3

<211> 261

<212> DNA

<213> Artificial Sequence

<220>

<221> CDS

<222> (1)...(261)

<223> Cys22 tat

<400> 3

```

atg gag cca gta gat cct aga cta gag ccc tgg aag cat cca gga agt      48
Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Lys His Pro Gly Ser
 1           5           10           15

cag cct aaa act gct ggt acc aat tgc tat tgt aaa aag tgt tgc ttt      96
Gln Pro Lys Thr Ala Gly Thr Asn Cys Tyr Cys Lys Lys Cys Cys Phe
          20           25           30

cat tgc caa gtt tgt ttc ata aca aaa gcc tta ggc atc tcc tat ggc      144
His Cys Gln Val Cys Phe Ile Thr Lys Ala Leu Gly Ile Ser Tyr Gly
          35           40           45

agg aag aag cgg aga cag cga cga aga cct cct caa ggc agt cag act      192
Arg Lys Lys Arg Arg Gln Arg Arg Arg Pro Pro Gln Gly Ser Gln Thr
          50           55           60

cat caa gtt tct cta tca aag cag ccc acc tcc caa tcc cga ggg gac      240
His Gln Val Ser Leu Ser Lys Gln Pro Thr Ser Gln Ser Arg Gly Asp
          65           70           75           80

ccg aca ggc ccg aag gaa tag                                          261
Pro Thr Gly Pro Lys Glu  *
          85

```

<210> 4
 <211> 86
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Cys22 tat

<400> 4
 Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Lys His Pro Gly Ser
 1 5 10 15
 Gln Pro Lys Thr Ala Gly Thr Asn Cys Tyr Cys Lys Lys Cys Cys Phe
 20 25 30
 His Cys Gln Val Cys Phe Ile Thr Lys Ala Leu Gly Ile Ser Tyr Gly
 35 40 45
 Arg Lys Lys Arg Arg Gln Arg Arg Arg Pro Pro Gln Gly Ser Gln Thr
 50 55 60
 His Gln Val Ser Leu Ser Lys Gln Pro Thr Ser Gln Ser Arg Gly Asp
 65 70 75 80
 Pro Thr Gly Pro Lys Glu
 85

<210> 5
 <211> 261
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> CDS
 <222> (1)...(261)
 <223> Lys41 tat

<400> 5
 atg gag cca gta gat cct aga cta gag ccc tgg aag cat cca gga agt 48
 Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Lys His Pro Gly Ser
 1 5 10 15

 cag cct aaa act gct tgt acc aat tgc tat tgt aaa aag tgt tgc ttt 96
 Gln Pro Lys Thr Ala Cys Thr Asn Cys Tyr Cys Lys Lys Cys Cys Phe
 20 25 30

 cat tgc caa gtt tgt ttc ata aca aca gcc tta ggc atc tcc tat ggc 144
 His Cys Gln Val Cys Phe Ile Thr Thr Ala Leu Gly Ile Ser Tyr Gly
 35 40 45

 agg aag aag cgg aga cag cga cga aga cct cct caa ggc agt cag act 192
 Arg Lys Lys Arg Arg Gln Arg Arg Arg Pro Pro Gln Gly Ser Gln Thr
 50 55 60

 cat caa gtt tct cta tca aag cag ccc acc tcc caa tcc cga ggg gac 240
 His Gln Val Ser Leu Ser Lys Gln Pro Thr Ser Gln Ser Arg Gly Asp
 65 70 75 80

 ccg aca ggc ccg aag gaa tag 261

Pro Thr Gly Pro Lys Glu *
85

<210> 6
<211> 86
<212> PRT
<213> Artificial Sequence

<220>
<223> Lys41 tat

<400> 6
Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Lys His Pro Gly Ser
1 5 10 15
Gln Pro Lys Thr Ala Cys Thr Asn Cys Tyr Cys Lys Lys Cys Cys Phe
20 25 30
His Cys Gln Val Cys Phe Ile Thr Thr Ala Leu Gly Ile Ser Tyr Gly
35 40 45
Arg Lys Lys Arg Arg Gln Arg Arg Arg Pro Pro Gln Gly Ser Gln Thr
50 55 60
His Gln Val Ser Leu Ser Lys Gln Pro Thr Ser Gln Ser Arg Gly Asp
65 70 75 80
Pro Thr Gly Pro Lys Glu
85

<210> 7
<211> 252
<212> DNA
<213> Artificial Sequence

<220>
<221> CDS
<222> (1)...(252)
<223> RGD tat

<400> 7
atg gag cca gta gat cct aga cta gag ccc tgg aag cat cca gga agt 48
Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Lys His Pro Gly Ser
1 5 10 15
cag cct aaa act gct tgt acc aat tgc tat tgt aaa aag tgt tgc ttt 96
Gln Pro Lys Thr Ala Cys Thr Asn Cys Tyr Cys Lys Lys Cys Cys Phe
20 25 30
cat tgc caa gtt tgt ttc ata aca aaa gcc tta ggc atc tcc tat ggc 144
His Cys Gln Val Cys Phe Ile Thr Lys Ala Leu Gly Ile Ser Tyr Gly
35 40 45
agg aag aag cgg aga cag cga cga aga cct cct caa ggc agt cag act 192
Arg Lys Lys Arg Arg Gln Arg Arg Arg Pro Pro Gln Gly Ser Gln Thr
50 55 60
cat caa gtt tct cta tca aag cag ccc acc tcc caa tcc ccg aca ggc 240
His Gln Val Ser Leu Ser Lys Gln Pro Thr Ser Gln Ser Pro Thr Gly
65 70 75 80

ccg aag gaa tag
Pro Lys Glu *

252

<210> 8
<211> 83
<212> PRT
<213> Artificial Sequence

<220>
<223> RGD tat

<400> 8
Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Lys His Pro Gly Ser
1 5 10 15
Gln Pro Lys Thr Ala Cys Thr Asn Cys Tyr Cys Lys Lys Cys Cys Phe
20 25 30
His Cys Gln Val Cys Phe Ile Thr Lys Ala Leu Gly Ile Ser Tyr Gly
35 40 45
Arg Lys Lys Arg Arg Gln Arg Arg Arg Pro Pro Gln Gly Ser Gln Thr
50 55 60
His Gln Val Ser Leu Ser Lys Gln Pro Thr Ser Gln Ser Pro Thr Gly
65 70 75 80
Pro Lys Glu

<210> 9
<211> 252
<212> DNA
<213> Artificial Sequence

<220>
<221> CDS
<222> (1)...(252)
<223> Lys41 RGD tat

<400> 9
atg gag cca gta gat cct aga cta gag ccc tgg aag cat cca gga agt 48
Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Lys His Pro Gly Ser
1 5 10 15

cag cct aaa act gct tgt acc aat tgc tat tgt aaa aag tgt tgc ttt 96
Gln Pro Lys Thr Ala Cys Thr Asn Cys Tyr Cys Lys Lys Cys Cys Phe
20 25 30

cat tgc caa gtt tgt ttc ata aca aca gcc tta ggc atc tcc tat ggc 144
His Cys Gln Val Cys Phe Ile Thr Thr Ala Leu Gly Ile Ser Tyr Gly
35 40 45

agg aag aag cgg aga cag cga cga aga cct cct caa ggc agt cag act 192
Arg Lys Lys Arg Arg Gln Arg Arg Arg Pro Pro Gln Gly Ser Gln Thr
50 55 60

cat caa gtt tct cta tca aag cag ccc acc tcc caa tcc ccg aca ggc 240

His Gln Val Ser Leu Ser Lys Gln Pro Thr Ser Gln Ser Pro Thr Gly
65 70 75 80

ccg aag gaa tag 252
Pro Lys Glu *

<210> 10
<211> 83
<212> PRT
<213> Artificial Sequence

<220>
<223> Lys41 RGD tat

<400> 10
Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Lys His Pro Gly Ser
1 5 10 15
Gln Pro Lys Thr Ala Cys Thr Asn Cys Tyr Cys Lys Lys Cys Cys Phe
20 25 30
His Cys Gln Val Cys Phe Ile Thr Thr Ala Leu Gly Ile Ser Tyr Gly
35 40 45
Arg Lys Lys Arg Arg Gln Arg Arg Arg Pro Pro Gln Gly Ser Gln Thr
50 55 60
His Gln Val Ser Leu Ser Lys Gln Pro Thr Ser Gln Ser Pro Thr Gly
65 70 75 80
Pro Lys Glu

<210> 11
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide corresponding to regions of Tat or of
other viral products or of cytokines used as immunogen

<400> 11
Met Glu Pro Val Asp Pro Arg Leu Glu Pro Trp Lys His Pro Gly Ser
1 5 10 15
Gln Pro Lys Thr
20

<210> 12
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide corresponding to regions of Tat or of
other viral products or of cytokines used as immunogen

<400> 12

Ala Cys Thr Asn Cys Tyr Cys Lys Lys Cys Cys Phe His Cys Gln Val
1 5 10 15
Cys Phe Ile Thr
20

<210> 13
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide corresponding to regions of Tat or of
other viral products or of cytokines used as immunogen

<400> 13
Gln Val Cys Phe Ile Thr Lys Ala Leu Gly Ile Ser Tyr Gly Arg Lys
1 5 10 15

<210> 14
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide corresponding to regions of Tat or of
other viral products or of cytokines used as immunogen

<400> 14
Ser Tyr Gly Arg Lys Lys Arg Arg Gln Arg Arg Arg Pro Pro Gln
1 5 10 15

<210> 15
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide corresponding to regions of Tat or of
other viral products or of cytokines used as immunogen

<400> 15
Arg Pro Pro Gln Gly Ser Gln Thr His Gln Val Ser Leu Ser Lys Gln
1 5 10 15

<210> 16
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide corresponding to regions of Tat or of
other viral products or of cytokines used as immunogen

<400> 16
His Gln Val Ser Leu Ser Lys Gln Pro Thr Ser Gln Ser Arg Gly Asp
1 5 10 15

<210> 17
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> synthetic peptide corresponding to regions of Tat or of
other viral products or of cytokines used as immunogen

<400> 17
Pro Thr Ser Gln Ser Arg Gly Asp Pro Thr Gly Pro Lys Glu
1 5 10

<210> 18
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Forward Rev. primer

<400> 18
atggcaggaa gaagc 15

<210> 19
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Reverse Rev. primer

<400> 19
ctattcttta gttcc 15

<210> 20
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Forward Nef. primer

<400> 20
atgggtggca agtgg 15

<210> 21
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
 <223> Reverse Nef. primer

<400> 21
 tcagcagtc cc ttgta 15

<210> 22
 <211> 15
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Forward Gag. primer

<400> 22
 atgggtgcga gagcg 15

<210> 23
 <211> 15
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Reverse Gag. primer

<400> 23
 ttattgtgac gaggg 15

<210> 24
 <211> 15
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Forward IL-12 primer

<400> 24
 atgtggcccc ctggg 15

<210> 25
 <211> 15
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Reverse IL-12 primer

<400> 25
 ttaggaagca ttcag 15

<210> 26
 <211> 15
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Forward IL-15 primer

<400> 26	
atgagaattt cgaaa	15
<210> 27	
<211> 15	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Reverse IL-15 primer	
<400> 27	
tcaagaagtg ttgat	15
<210> 28	
<211> 15	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Forward Tat primer	
<400> 28	
atggagccag tagat	15
<210> 29	
<211> 15	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Reverse Tat primer	
<400> 29	
ctattccttc gggcc	15
<210> 30	
<211> 27	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Forward Tat/Rev primer	
<400> 30	
ggcccgaagg aaatggcagg aagaagc	27
<210> 31	
<211> 27	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Forward Tat/Nef primer	
<400> 31	

ggcccgaagg aaatgggtgg caagtgg 27

<210> 32

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Forward Tat/Gag primer

<400> 32

ggccctgaag gaaatgggtg cgagagcg 28

<210> 33

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Forward Tat/IL-12 primer

<400> 33

ggcccgaagg aaatgtggcc ccctggg 27

<210> 34

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Forward Tat/IL-15 primer

<400> 34

ggcccgaagg aaatgagaat ttcgaaa 27

<210> 35

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer SG1096Ngag

<400> 35

ttaggctacg acccggcgga aaga 24

<210> 36

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer SG1592 CgagD

<400> 36

ataggggtg cagccttctg acag 24